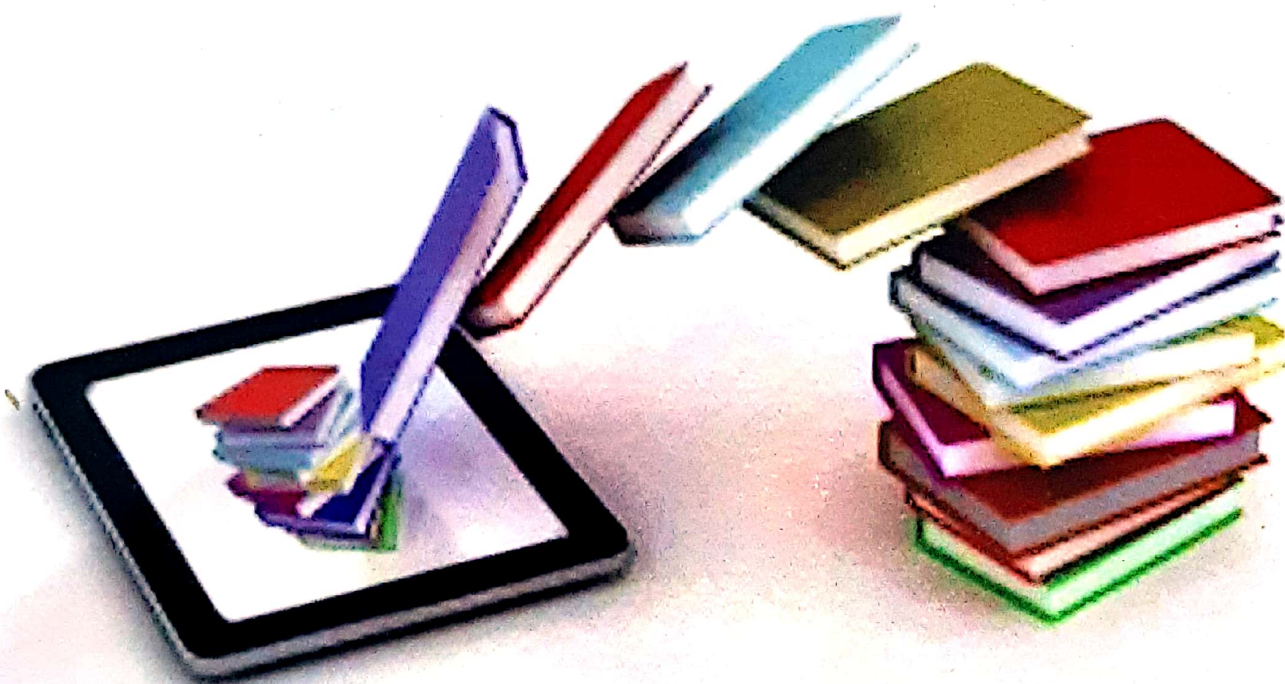


# EMERGING TRENDS IN ACADEMIC LIBRARIES in ICT ERA

*Manish*



Edited by  
**Tarsem Lal**



# Emerging Trends in Academic Libraries In ICT Era

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## Awareness and use of digital resources by postgraduate students in medical colleges

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### Abstract

The medical field is integrating the technologies immediately. The effect of ICT in the medical field is, increasing the generation of information and wide access to information, education, research, practice and learning. To survive in the technology driven era, medical professionals should have information literacy knowledge. Digital resources are widely used because of its features. Most of the postgraduates who are born and brought up in the digital era. Part of their academics, they are involved in the teaching, learning, research and patient care. All these activities require them to update their knowledge. The effort is made to know the awareness and use of digital resources among the postgraduate students of medical colleges.

**Keywords:** Digital Resource, Digital Resources-awareness, Digital Resources-use, Medical College, Postgraduates.

### Introduction

The influence of Information and Communication Technology (ICT) has changed the medical field enormously. Change is the only thing remained constant in this technology driven era. The medical field is transforming and accepting these changes very quickly. With this effect, information is doubling in the medical field in a very short period.

The learning pattern of postgraduate students is also transforming. They have started to prefer digital resources over the print resources. The price drop of mobile technologies and internet availability has also influenced to prefer the digital resources.

To survive with the ever growing information, postgraduates should have awareness about the medical information resources and about how to access the resources.

The information technology is playing a vital role in the creation of information and its usage. Information is growing in very fast pace. The fall in the price of the internet, mobile technologies and other gadgets are attracting the people to adopt these gadgets in their life. With this development, global information is available at the finger tips. Further, the basic features and advantages of digital resources have influenced to adopt and use the digital resources more frequently and comfortably.

There are different types of digital resources available in the medical field. Namely, books, journals, bibliographical databases, full-text databases, E-thesis and dissertations, Institutional Repositories, Image databases, Discussion forums and newsgroups, Library web-portals, abstracting and Indexing databases, etc.

### Review of literature

The internet has become the information source. The convenient and quick access feature of digital resources is attracting the information users and they are adopting them very fast. Brown (2000) study also discloses how the internet has changed the information user's perceptions about recognizing, retrieving and using the information.

Norman (2006) Describes "Information literacy is the ability to recognize when information is needed, locate potential resources, develop appropriate search strategies, evaluate results, and apply relevant knowledge to decision-making".

Ward's (2001) and Moberg (1999) study reveals that, "e-learning among the medical faculty increased usefulness of educational interventions in the face of the social, scientific and pedagogical challenges".

Dixon (2017) expresses "healthcare moves towards technology-driven population health management, clinicians must adopt complex digital platforms to access health information and document care".

Pluye (2004) said in his study that, the impacts of information retrieval technologies as "six types of impact on physician practice: practice improvement, reassurance, learning, confirmation, recall and frustration". Further, Pluye's (2005) his one more study observations reveals that, "nearly one-third of searches using information-retrieval technology may have a positive impact on physicians".

Alison (2012) narrates, "The paradigm transition in print to digital caused by the effect of ICT. It has the way of information searched, processed, packaged, stored and disseminated to meet the ever changing demands of user needs"

Trupti K Srivastav(2014)study tells, "International organizations such as the United Nations (UN) and the World Health Organization (WHO) have acknowledged Information Communication Technology (ICT) as a useful tool to address education in health care sector".

The ICT based education system will only successful when users learn to access the computers and the internet. The information communication channel has transformed the duties / skills of participants of this channel, i.e. publishers, information users and the information mediators. The boundaries of learning have removed.

The review of literature reveals that the medical postgraduate students are using the internet very frequently. They use the internet for teaching, learning, research and for patient care purposes. In India, even though the use of digital resources is less when we compare to western countries, gradually its usage is increasing.

**Objectives of the study**

The study is undertaken to find out the awareness and usage of different digital resources by the medical postgraduate student. The main objectives of the study are as follows:

To study the level of awareness about the digital resources

To study the level of usage about the digital resources

To find out the level of competency in using using digital resources

To identify the frequently used digital resources

**Methodology**

The survey method is used in the study. A structured questionnaire was designed to collect the data from the medical postgraduate students. The questionnaires were distributed directly to 490 medical postgraduate students, correctly filled 422 questionnaires received back. The average response rate is 86%.

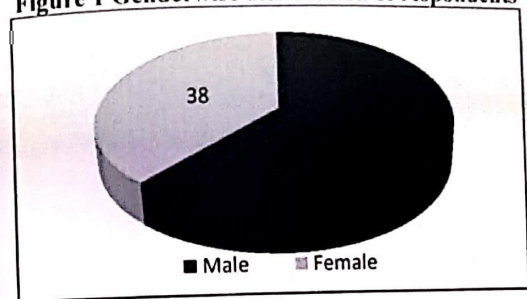
**Statistical Analysis**

Qualitative data were written numerically using codes. Excel spreadsheet was used to prepare the master chart. The data were analysed using tables, diagrams and percentages. The Chi-square test was applied to find the association between the variables. P values  $\leq 0.05$  considered statistically significant. Statistical Package for Social Sciences (SPSS) IBM Version 20 was used for statistical analysis.

**Data analysis and Interpretation**  
**Genderwise distribution of respondents**

The gender study is one of the demographic characteristics, which may influence on the use of digital resources. Okiki(2011)study shows that males are browsing or using digital resources for enjoyment, whereas females are using digital resources for work related purpose.

**Figure 1 Genderwise distribution of respondents**



The above figures shows that, out of the total respondents, the majority is male respondents (62%) as compared to female respondents.

**Age wise distribution of respondents**

Age is one of the factors to examining the level of awareness and use of digital resources. Tenpir in his study found that youngsters are more passionate to use the digital resources and they rely more on the information in digital form (2003). There are studies, which proved age has influenced on the use of digital resources and it also influences on the perception about the digital resources.

**Table 1 Agewise distribution**

| Age Group | Frequency | Percent |
|-----------|-----------|---------|
| <26       | 93        | 22      |
| 27-29     | 190       | 45      |
| 30-32     | 87        | 21      |
| 33-35     | 35        | 8       |
| >36       | 17        | 4       |
| Total     | 422       | 100     |

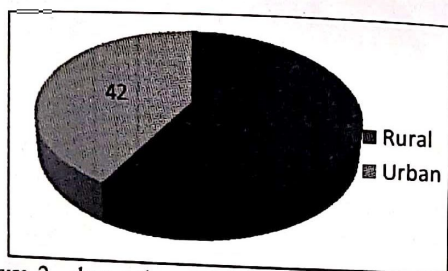
Mean $\pm$ S.D = 28.7 $\pm$ 2.8

The maximum number of study subjects among postgraduates in this study was in the age group of 27-29 (45%), followed by <26 age group (22%) and 30-32 age group (21%). The average age of subjects was found to be 28.7 years (SD = 2.8).

### Social background of respondents

Several studies have been conducted on the implementation of e-learning technologies in rural areas, with the objectives to know the effect of socio-cultural settings with the use of digital resources. Teresa Correa and Isabel Pavez in their study, Digital inclusion in rural areas: A qualitative exploration of the challenges faced by people from isolated communities revealed that, in the ICT era, internet has reached majority of the population, and it has embedded in many human activities. Still some communities in the society are digitally barred and facing some challenges (2016). Hence this study is also collected the data on social background of the respondents.

Figure 2 Social background of P.G.



The figure 2 shows the social background of the respondents. 58% of the postgraduates are from urban and 42% are from rural backgrounds.

### Awareness about the digital resources

The medical field is highly influenced by the technology and the information in this field is doubling very quickly. The other side postgraduates needs to update themselves and aware of the information resources available in different forms in the information society.

Table 2 Level of awareness about the digital resources

| Digital Resources | Very much aware | More aware | Somewhat aware | Not aware |
|-------------------|-----------------|------------|----------------|-----------|
| E-Books           | 295(70)         | 106(25)    | 21(5)          | 0(0)      |

|                                    |         |         |         |         |
|------------------------------------|---------|---------|---------|---------|
| E-Journals                         | 329(78) | 80(19)  | 13(3)   | 0(0)    |
| Bibliographic Databases            |         |         |         |         |
| MEDLINE / PUBMED                   | 363(86) | 38(9)   | 21(5)   | 0(0)    |
| CINHAL                             | 63(15)  | 80(19)  | 93(22)  | 186(44) |
| IndMed                             | 46(11)  | 55(13)  | 76(18)  | 245(56) |
| WorldCat                           | 0(0)    | 0(0)    | 51(12)  | 371(88) |
| Full-text Databases                |         |         |         |         |
| PUBMED Central                     | 286(68) | 106(25) | 30(7)   | 0(0)    |
| MedInd                             | 38(9)   | 25(6)   | 110(26) | 249(59) |
| Cochrane Library                   | 72(17)  | 89(21)  | 126(30) | 135(32) |
| Proquest                           | 51(12)  | 72(17)  | 181(43) | 118(28) |
| Science Direct                     | 46(11)  | 38(9)   | 148(35) | 190(45) |
| Wiley Online Library               | 63(15)  | 55(13)  | 169(40) | 135(32) |
| MD Consult / ClinicalKey           | 0(0)    | 0(0)    | 42(10)  | 380(90) |
| Open J-gate                        | 30(7)   | 25(6)   | 93(22)  | 274(65) |
| Abstracting and Indexing databases |         |         |         |         |
| Biological Abstracts               | 4(4)    | 26(6)   | 46(11)  | 346(82) |
| POPLINE                            | 0(0)    | 0(0)    | 13(3)   | 409(97) |
| Scopus                             | 93(22)  | 106(25) | 126(30) | 97(23)  |
| Chemical Abstracts                 | 0(0)    | 0(0)    | 38(9)   | 384(91) |
| Consortium's resources             |         |         |         |         |
| HELINET                            | 401(95) | 13(3)   | 8(2)    | 0(0)    |
| ERMED                              | 0(0)    | 0(0)    | 8(2)    | 414(98) |
| EBSCO Publishing                   | 8(2)    | 4(1)    | 0(0)    | 410(97) |
| Others                             |         |         |         |         |
| E-Thesis & Dissertations           | 317(75) | 42(10)  | 17(4)   | 46(11)  |
| Institutional Repository           | 135(32) | 34(8)   | 38(9)   | 215(51) |
| Image Databases                    | 8(2)    | 18(4)   | 76(18)  | 320(76) |
| E-discussion Forums & Newsgroups   | 114(27) | 127(30) | 80(19)  | 101(24) |
| Library web-portal                 | 52(12)  | 72(17)  | 97(23)  | 202(48) |

The table 2 shows that, levels of awareness about the popular digital resources among the postgraduates. They are very much aware about Health Science Library & Information Network (HELINET) (95%), followed by MEDLINE / PUBMED (86%) and also about e-journals, e-books and e-thesis / dissertations that they know more than 70% as compared to other resources. But they did not know about MD Consult / ClinicalKey, WorldCat, Biological Abstracts, Popline, Chemical Abstracts, ERMED, EBSCO Publishing, etc.

#### Frequency of use of digital resources

Day by day digital resources are increasing very rapidly. Similarly the use of digital resources is also increasing with the effect of ICT. The educational institutions are also concentrating on the digital resources procurement. The increase in the open access movement also influencing the enhance in the use of digital resources. The frequency of use of digital resources also shows the level of importance of digital resources to fulfil the information needs of users. The frequency of use of digital resources also enables the more or less popular used resources.

**Table 3 Frequency of use of digital resources**

| Digital Resources              | More frequently | Frequently | Less frequently | Never    |
|--------------------------------|-----------------|------------|-----------------|----------|
| E-Books                        | 135(32)         | 164(39)    | 89(21)          | 34(8)    |
| E-Journals                     | 228(54)         | 177(42)    | 17(4)           | 0(0)     |
| <b>Bibliographic Databases</b> |                 |            |                 |          |
| MEDLINE / PUBMED               | 330(78)         | 38(9)      | 46(11)          | 8(2)     |
| CINHAL                         | 0(0)            | 0(0)       | 0(0)            | 422(100) |
| IndMed                         | 0(0)            | 0(0)       | 0(0)            | 422(100) |
| WorldCat                       | 0(0)            | 0(0)       | 0(0)            | 422(100) |
| <b>Full-text Databases</b>     |                 |            |                 |          |
| PUBMED Central                 | 135(32)         | 80(19)     | 173(41)         | 34(8)    |
| MedInd                         | 8(2)            | 8(2)       | 64(15)          | 342(81)  |
| Cochrane Library               | 17(4)           | 4(1)       | 17(4)           | 384(91)  |
| Proquest                       | 21(5)           | 30(7)      | 13(3)           | 358(85)  |
| Science Direct                 | 0(0)            | 0(0)       | 0(0)            | 422(100) |

|   |         |        |         |          |
|---|---------|--------|---------|----------|
| Wiley Online Library                      | 0(0)    | 0(0)   | 0(0)    | 422(100) |
| MD Consult / Clinical Key                 | 0(0)    | 0(0)   | 0(0)    | 422(100) |
| Open J-gate                               | 0(0)    | 0(0)   | 0(0)    | 422(100) |
| <b>Abstracting and Indexing databases</b> |         |        |         |          |
| Biological Abstracts                      | 0(0)    | 0(0)   | 0(0)    | 422(100) |
| POPLINE                                   | 0(0)    | 0(0)   | 0(0)    | 422(100) |
| Scopus                                    | 38(9)   | 59(14) | 89(21)  | 236(56)  |
| Chemical Abstracts                        | 0(0)    | 0(0)   | 0(0)    | 422(100) |
| <b>Consortium resources</b>               |         |        |         |          |
| HELINET                                   | 278(66) | 80(19) | 34(8)   | 30(7)    |
| ERMED                                     | 0(0)    | 0(0)   | 0(0)    | 422(100) |
| EBSCO Publishing                          | 0(0)    | 0(0)   | 0(0)    | 422(100) |
| <b>Others</b>                             |         |        |         |          |
| E-Thesis and Dissertations                | 76(18)  | 93(22) | 143(34) | 110(26)  |
| Institutional Repository                  | 88(21)  | 51(12) | 17(4)   | 265(63)  |
| Image Databases                           | 8(2)    | 4(1)   | 22(5)   | 388(92)  |
| E-Discussion Forums & Newsgroups          | 47(11)  | 30(7)  | 13(3)   | 332(79)  |
| Library web-portal                        | 30(7)   | 46(11) | 89(21)  | 257(61)  |

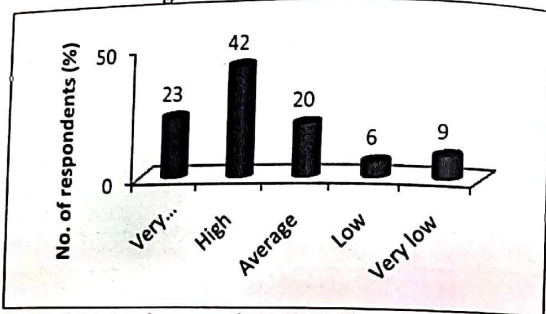
With regard to the frequency of use of different digital resources, the above table 5.9 shows that, the level of frequency of use of digital resources. It was found that Medline / PUBMED was used more frequently (78%) than the other resources, followed by HELINET (66%). Other than this, the postgraduates preferred e-journals 54%, e-books (32%) and PUBMED Central (32%) frequently.

#### Level of competency in the using digital resources

To cope up with the ever changing technology and growing resources, digital information users need to be competent in using digital resources. They should possess information literacy skills to track the growing information.

Dare Samuel Adeleke and Evelyn Nkechi Emeahara study reveals that, "the low level of usage of electronic resources, especially full text database, among postgraduate students in the University of Ibadan revealed that they need to be more competent in using communication technologies, including computers and associated skills such as desktop publishing, database management, programming, and web page design to navigate in an electronic environment" (2016).

Figure 3 Level of competency



Among postgraduate students, 178 (42%) have a high level of competence. The 84 (20%) of them have average, followed by 63 (15%) have a low level of competence in using the digital resources.

**Levels of awareness Vs frequency of use of digital resources**

Always information, knowledge and practice are interconnected. Most of the time users who have knowledge or awareness about the resources are effectively use the resources. Manjula and Padmamma study reveals lack of awareness about the digital resources influence on the less use of those resources by the faculty. The lack of awareness may be because of their library is not subscribing or no individual subscription or there was no awareness program conducted by the library (2016). The current study is undertaken to find out the effect of level of awareness on frequency of use of the digital resources.

Table 4 Levels of awareness Vs frequency of use of digital resources

| Digital resources awareness | Frequency of use of digital resources |            |              |        | Total   | P Value |
|-----------------------------|---------------------------------------|------------|--------------|--------|---------|---------|
|                             | More frequently                       | Frequently | Occasionally | Never  |         |         |
| <b>E-books</b>              |                                       |            |              |        |         |         |
| Very much                   | 100(74)                               | 108(66)    | 62(70)       | 25(73) | 295(70) | <0.001  |

|   |         |         |         |       |         |        |
|---|---------|---------|---------|-------|---------|--------|
| aware   |         |         |         |       |         |        |
| More aware  | 35(26)  | 49(30)  | 20(23)  | 2(6)  | 102(25) |        |
| Somewhat aware  | 0(0)    | 7(4)    | 0(0)    | 7(21) | 21(5)   |        |
| Not aware   | 0(0)    | 0(0)    | 0(0)    | 0(0)  | 0       |        |
| Total   | 135(32) | 164(39) | 89(21)  | 34(8) | 422     |        |
| <b>E-Journals</b>   |         |         |         |       |         |        |
| Very much aware   | 198(87) | 115(65) | 16(94)  | 0(0)  | 329(78) | <0.001 |
| More aware  | 23(10)  | 56(32)  | 1(6)    | 0(0)  | 80(19)  |        |
| Somewhat aware  | 7(3)    | 6(3)    | 0(0)    | 0(0)  | 13(3)   |        |
| Not aware   | 0(0)    | 0(0)    | 0(0)    | 0(0)  | 0(0)    |        |
| Total   | 228(54) | 177(42) | 17(4)   | 0(0)  | 422     |        |
| <b>MEDLINE / PUBMED</b>   |         |         |         |       |         |        |
| Very much aware   | 297(90) | 24(63)  | 37(81)  | 5(62) | 363(86) | <0.001 |
| More aware  | 19(6)   | 9(24)   | 7(15)   | 3(38) | 38(9)   |        |
| Somewhat aware  | 14(4)   | 5(13)   | 2(4)    | 0(0)  | 21(5)   |        |
| Not aware   | 0(0)    | 0(0)    | 0(0)    | 0(0)  | 0(0)    |        |
| Total   | 330(78) | 38(9)   | 46(11)  | 8(2)  | 422     |        |
| <b>CINHAL(Cumulative Index of Nursing and Allied Health Literature)</b> |         |         |         |       |         |        |
| Very much aware   | 0(0)    | 0(0)    | 53(15)  | 0(0)  | 63(15)  |        |
| More aware  | 0(0)    | 0(0)    | 80(19)  | 0(0)  | 80(19)  |        |
| Somewhat aware  | 0(0)    | 0(0)    | 93(22)  | 0(0)  | 93(22)  |        |
| Not aware   | 0(0)    | 0(0)    | 186(44) | 0(0)  | 186(44) |        |





|   |      |      |      |              |         |
|---|------|------|------|--------------|---------|
| Not aware                                   | 0(0) | 0(0) | 0(0) | 190<br>(45)  | 190(45) |
| Total                                       | 0(0) | 0(0) | 0(0) | 422          | 422     |
| <b>Wiley Online Library</b>                 |      |      |      |              |         |
| Very much aware                             | 0(0) | 0(0) | 0(0) | 63(15)       | 63(15)  |
| More aware                                  | 0(0) | 0(0) | 0(0) | 55(13)       | 55(13)  |
| Somewh at aware                             | 0(0) | 0(0) | 0(0) | 169<br>(40)  | 169(40) |
| Not aware                                   | 0(0) | 0(0) | 0(0) | 135<br>(32)  | 135(32) |
| Total                                       | 0(0) | 0(0) | 0(0) | 422<br>(100) | 422     |
| <b>MD Consult / ClinicalKey</b>             |      |      |      |              |         |
| Very much aware                             | 0(0) | 0(0) | 0(0) | 42 (10)      | 42(10)  |
| More aware                                  | 0(0) | 0(0) | 0(0) | 380<br>(90)  | 380(90) |
| Somewh at aware                             | 0(0) | 0(0) | 0(0) | 0 (0)        | 0(0)    |
| Not aware                                   | 0(0) | 0(0) | 0(0) | 0(0)         | 0(0)    |
| Total                                       | 0(0) | 0(0) | 0(0) | 422<br>(100) | 422     |
| <b>Open J-Gate</b>                          |      |      |      |              |         |
| Very much aware                             | 0(0) | 0(0) | 0(0) | 30(7)        | 30(7)   |
| More aware                                  | 0(0) | 0(0) | 0(0) | 25(6)        | 25(6)   |
| Somewh at aware                             | 0(0) | 0(0) | 0(0) | 93(22)       | 93(22)  |
| Not aware                                   | 0(0) | 0(0) | 0(0) | 274<br>(65)  | 274(65) |
| Total                                       | 0(0) | 0(0) | 0(0) | 422<br>(100) | 422     |
| <b>Abstracting &amp; Indexing Databases</b> |      |      |      |              |         |
| <b>Biological Abstracts</b>                 |      |      |      |              |         |

|  |        |        |        |              |         |
|--|--------|--------|--------|--------------|---------|
| Very much aware                                | 0(0)   | 0(0)   | 0(0)   | 4(1)         | 4(1)    |
| More aware                                     | 0(0)   | 0(0)   | 0(0)   | 26(6)        | 26(6)   |
| Somewh at aware                                | 0(0)   | 0(0)   | 0(0)   | 46 (11)      | 46(11)  |
| Not aware                                      | 0(0)   | 0(0)   | 0(0)   | 346<br>(82)  | 346(82) |
| Total  | 0(0)   | 0(0)   | 0(0)   | 422<br>(100) | 422     |
| <b>POPLINE (Population Information Online)</b> |        |        |        |              |         |
| Very much aware                                | 0(0)   | 0(0)   | 0(0)   | 0(0)         | 0(0)    |
| More aware                                     | 0(0)   | 0(0)   | 0(0)   | 0(0)         | 0(0)    |
| Somewh at aware                                | 0(0)   | 0(0)   | 0(0)   | 13(3)        | 13(3)   |
| Not aware                                      | 0(0)   | 0(0)   | 0(0)   | 409<br>(97)  | 409(97) |
| Total  | 0(0)   | 0(0)   | 0(0)   | 422<br>(100) | 0(0)    |
| <b>Scopus</b>                                  |        |        |        |              |         |
| Very much aware                                | 21(55) | 19(32) | 15(17) | 38(16)       | 93(22)  |
| More aware                                     | 5(13)  | 24(41) | 44(49) | 33(14)       | 106(25) |
| Somewh at aware                                | 12(32) | 10(17) | 16(18) | 88 (37)      | 126(30) |
| Not aware                                      | 0(0)   | 6(10)  | 14(16) | 77 (33)      | 97(23)  |
| Total  | 38(9)  | 59(14) | 89(21) | 236<br>(56)  | 422     |
| <b>Chemical Abstracts</b>                      |        |        |        |              |         |
| Very much aware                                | 0(0)   | 0(0)   | 0(0)   | 0(0)         | 0(0)    |
| More aware                                     | 0(0)   | 0(0)   | 0(0)   | 0(0)         | 0(0)    |

<0.0001

|  |         |        |         |          |         |       |
|--|---------|--------|---------|----------|---------|-------|
| Somewh at aware  | 0(0)    | 0(0)   | 0(0)    | 38(9)    | 38(9)   | 0.002 |
| Not aware  | 0(0)    | 0(0)   | 0(0)    | 384(91)  | 384(91) |       |
| Total  | 0(0)    | 0(0)   | 0(0)    | 422(100) | 422     |       |
| <b>Consortium</b>  |         |        |         |          |         |       |
| <b>HELINET (Health Science Library &amp; Information Network)</b>          |         |        |         |          |         |       |
| Very much aware  | 265(95) | 72(90) | 34(100) | 30(100)  | 401(95) | 0.002 |
| More aware   | 5(2)    | 8(10)  | 0(0)    | 0(0)     | 13(3)   |       |
| Somewh at aware  | 8(3)    | 0(0)   | 0(0)    | 0(0)     | 8(2)    |       |
| Not aware  | 0(0)    | 0(0)   | 0(0)    | 0(0)     | 0(0)    |       |
| Total  | 278(66) | 80(19) | 34(8)   | 30(8)    | 422     |       |
| <b>ERMED (National Medical Library's Electronic Resources in Medicine)</b> |         |        |         |          |         |       |
| Very much aware  | 0(0)    | 0(0)   | 0(0)    | 0(0)     | 0(0)    | 0.002 |
| More aware   | 0(0)    | 0(0)   | 0(0)    | 0(0)     | 0(0)    |       |
| Somewh at aware  | 0(0)    | 0(0)   | 0(0)    | 8(2)     | 8(2)    |       |
| Not aware  | 0(0)    | 0(0)   | 0(0)    | 414(98)  | 414(98) |       |
| Total  | 0(0)    | 0(0)   | 0(0)    | 422(100) | 422     |       |
| <b>EBSCO Publishing</b>  |         |        |         |          |         |       |
| Very much aware  | 0(0)    | 0(0)   | 0(0)    | 8(2)     | 8(2)    | 0.002 |
| More aware   | 0(0)    | 0(0)   | 0(0)    | 4(1)     | 4(1)    |       |
| Somewh at aware  | 0(0)    | 0(0)   | 0(0)    | 0(0)     | 0(0)    |       |
| Not aware  | 0(0)    | 0(0)   | 0(0)    | 410(97)  | 410(97) |       |

|  |        |        |         |          |         |        |  |
|--|--------|--------|---------|----------|---------|--------|--|
| Total  | 0(0)   | 0(0)   | 0(0)    | 422(100) | 422     | 0.0001 |  |
| <b>E-theses &amp; Dissertations</b>          |        |        |         |          |         |        |  |
| Very much aware                              | 68(89) | 76(82) | 96(67)  | 77(70)   | 317(75) |        |  |
| More aware                                   | 3(4)   | 17(18) | 18(13)  | 4(4)     | 42(10)  | 0.0001 |  |
| Somewh at aware                              | 0(0)   | 0(0)   | 17(12)  | 0(0)     | 17(4)   |        |  |
| Not aware                                    | 5(7)   | 0(0)   | 12(8)   | 29(26)   | 46(11)  |        |  |
| Total  | 76(18) | 93(22) | 143(34) | 110(26)  | 422     |        |  |
| <b>Institutional Repository</b>              |        |        |         |          |         |        |  |
| Very much aware                              | 38(43) | 23(45) | 17(100) | 57(22)   | 135(32) | 0.001  |  |
| More aware                                   | 1(1)   | 12(23) | 0(0)    | 21(8)    | 34(8)   |        |  |
| Somewh at aware                              | 1(1)   | 2(4)   | 0(0)    | 35(13)   | 38(9)   |        |  |
| Not aware                                    | 49(55) | 14(28) | 0(0)    | 152(57)  | 215(51) |        |  |
| Total  | 89(21) | 51(12) | 17(4)   | 265(63)  | 422     |        |  |
| <b>Image databases</b>                       |        |        |         |          |         |        |  |
| Very much aware                              | 0(0)   | 0(0)   | 2(9)    | 6(1)     | 8(2)    | 0.023  |  |
| More aware                                   | 0(0)   | 0(0)   | 3(14)   | 15(4)    | 18(4)   |        |  |
| Somewh at aware                              | 0(0)   | 0(0)   | 0(0)    | 76(20)   | 76(18)  |        |  |
| Not aware                                    | 8(100) | 4(100) | 17(77)  | 291(75)  | 320(76) |        |  |
| Total  | 8(2)   | 4(1)   | 22(5)   | 388(92)  | 422     |        |  |
| <b>E-discussion Forums &amp; News groups</b> |        |        |         |          |         |        |  |
| Very much aware                              | 23(49) | 5(17)  | 1(8)    | 85(26)   | 114(27) | 0.001  |  |

|                    |        |        |        |         |         |         |
|--------------------|--------|--------|--------|---------|---------|---------|
| aware              |        |        | 6(46)  | 89(27)  | 127(30) |         |
| More aware         | 13(28) | 19(63) |        | 69(21)  | 80(19)  |         |
| Somewhat aware     | 6(13)  | 4(13)  | 1(8)   | 89(27)  | 101(24) |         |
| Not aware          | 5(11)  | 2(7)   | 5(38)  | 332(79) | 422     |         |
| Total              | 47(11) | 30(7)  | 13(3)  |         |         |         |
| Library web-portal |        |        |        |         |         |         |
| Very much aware    | 11(37) | 5(11)  | 8(9)   | 27(11)  | 51(12)  |         |
| More aware         | 14(47) | 11(24) | 20(22) | 27(11)  | 72(17)  |         |
| Somewhat aware     | 5(17)  | 24(52) | 22(25) | 46(18)  | 97(23)  | <0.0001 |
| Not aware          | 0(0)   | 6(13)  | 39(44) | 156(49) | 202(50) |         |
| Total              | 30(7)  | 46(11) | 89(21) | 257(61) | 422     |         |

The postgraduate students are very much aware and used more frequently e-books (74%), e-journals (84%), Medline (90%), Cochrane Library (48%), Scopus (55%), HELINET Consortium (95%) and E-theses and E-dissertations (89%). Further, the resources which are having very much aware, but never used are PubMed (76%) and MDConsult / Clinical Keys (90%). The E-discussion forums are the resources, have more awareness among postgraduates and used frequently (65%). The Proquest (48%) and the Wiley Online Library (40%) are the resources never used by the postgraduates even though they are somewhat aware about these resources.

The postgraduates are not aware about CINHAL, but using it occasionally CINHAL (44%). But, all most all the postgraduates using this database occasionally. Surprisingly, the study reveals the majority of the postgraduates responded they are not aware and never used IndMed (58%), WorldCat (88%), MedInd (60%), ScienceDirect (45%), J-Gate (65%), Chemical Abstracts (91%), Biological Abstracts (82%), Popline (97%), Ermed (98%), EBSCO Publishing (97%), Institutional Repositories (57%), Library Web Portals (49%) and Image databases (75%).

### Findings of the study

- The maximum number of study subjects in the study was in the age group of 27-29 (45%)
- The greater part of the respondents are from an urban background accounting 58% of postgraduates.
- The postgraduates are very much aware about HELINET (95%), followed by MEDLINE / PUBMED (86%), E-journals (78%), E-dissertations (75%) and E-books (70%). They do not know about MD Consult / Clinical Keys, WorldCat, Biological Abstracts, Popline, Chemical Abstracts, ERMED, EBSCO Publishing, etc.
- The majority of the postgraduate students were using Medline / PUBMED more frequently (78%) than the other resources, followed by HELINET (66%). The frequently used resources are e-journals (54%), e-books (32%) and PUBMED Central (32%).
- Among the respondents, 178 (42%) have a high level of competence in using the digital resources. The orientation on digital resources is required.
- They have suggested that, the library web page should also provide the information about the subscribed and open access resources related to medical field.
- Librarians should conduct workshops on the different information sources available on the internet, their features, how best they can make useful, etc.
- It is also suggested that, libraries should also participate in the consortium, other than the HELINET.

### Conclusion

Medical postgraduates need to update their knowledge about information resources and access; otherwise it is very difficult to track the growing knowledge. Specially, in the medical field, information is utilized immediately for the life and death of patients. And the information is doubling in very short span and identifying the authentic information is still difficult. Literature search skills can help in finding authentic information in time.

The increase in the digital media influence on the large quantity of information generation. With this effect, the time gap between the information generation and its utilization has reduced drastically; it's all because of the influence of ICT. Organising the new forms of information and communicating to its end user is a challenging job for the librarians. The librarians role as a mediator to connect the information to its end user plays vital role at this juncture. Even

continuing education for library professionals is also very important. The knowledge gained in continuing education can be applied to store, organize and to disseminate the ever growing digital information.

The study findings are helpful for librarians in collection development, conducting awareness programs on less used resources to bring them into main stream to enhance their usage.

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